



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,863	08/25/2003	Tae Hwan Jung	1594.1274	1800

21171 7590 08/17/2005

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

AYRES, TIMOTHY MICHAEL

ART UNIT	PAPER NUMBER
----------	--------------

3637

DATE MAILED: 08/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,863

Applicant(s)

JUNG, TAE HWAN

Examiner

Timothy M. Ayres

Art Unit

3637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/25/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

This is a first office action on the merits of application SN 10/646,863.

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show grooves formed on a separate member coupled to the moveable body and the control chamber defined in separate member provided at a predetermined position on a sidewall of the leg casing as described in the specification and in claims 13 and 41. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

Art Unit: 3637

should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 13 and 41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is unclear how the grooves are formed on a separate member and how that member is attached to the movable body.

Art Unit: 3637

5. Claims 16 and 43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is unclear how the control chamber is defined in a separate member and how that member is attached to the sidewall of the leg casing.

Claims 1-17 and 18-27 will be treated as a combination of the control device and the refrigerator since the structures of the refrigerator are recited positively in these claims.

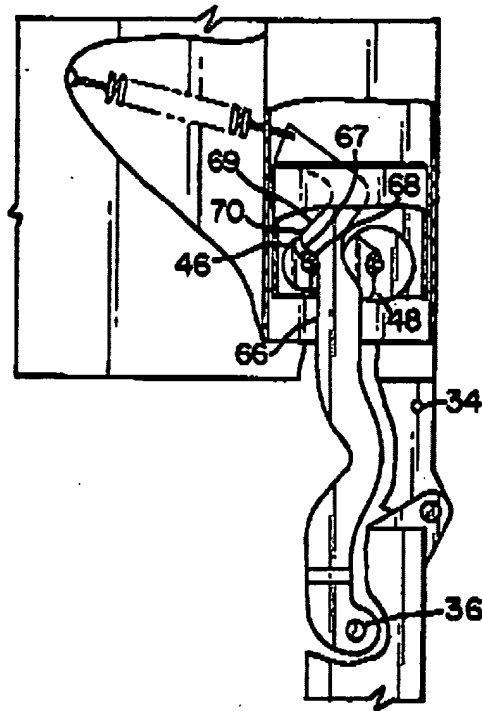
Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 6, 7, 12, 14, 28, 29, 34, 35, and 40 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent 5,220,747 to Cherry. Cherry '747 discloses a door control device for a refrigerator (10) having a refrigerator door (14). A movable body (38) is coupled to the refrigerator door (14). Wherein the movable body (38) is arranged to move in opposite directions in accordance with opening and closing actions of the refrigerator door. A control unit (54, 54a) controlling an opposite directional movement of the movable body in a multi-stage manner.



Cherry '747 Figure 7

8. Regarding claims 14 and 28, the refrigerator (10) is defined as a cabinet (11) with a storage compartment (12). The door (14) is hinged to the cabinet (11) to close the storage compartment (12). The device is disposed in a leg casing (22) at a lower portion of the refrigerator (10) as best shown in figure 1.

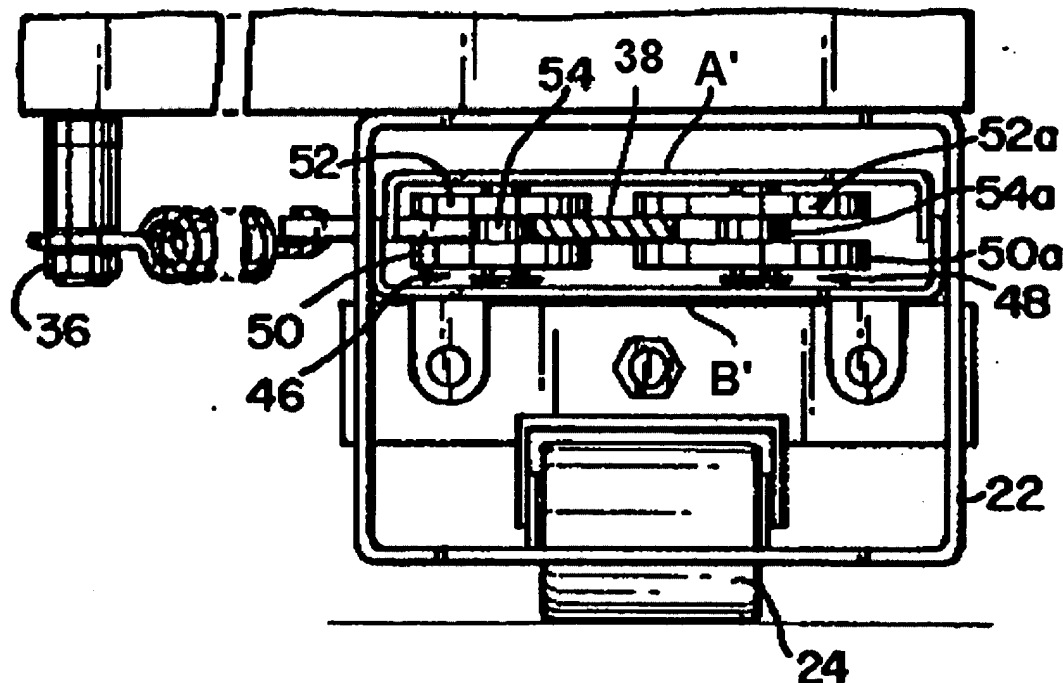
9. Regarding claims 2 and 29, a guide element (50,52,50a, 52a, A', B') contains the movable body (38) and guides the opposite directional movement of the movable body.

10. Regarding claims 6 and 34, the movable body (38) is provided with a plurality of grooves (65,68) formed along a longitudinal side surface.

11. Regarding claims 7 and 35, the control unit (54,54a) comprises a locking unit (54, 54a) selectively engaging with the plurality of grooves provided to the movable body.

Art Unit: 3637

12. Regarding claims 12 and 40, the grooves (65,68) of the movable body (38) are smoothly curved to form a waved configuration.



Cherry '747 Figure 4

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

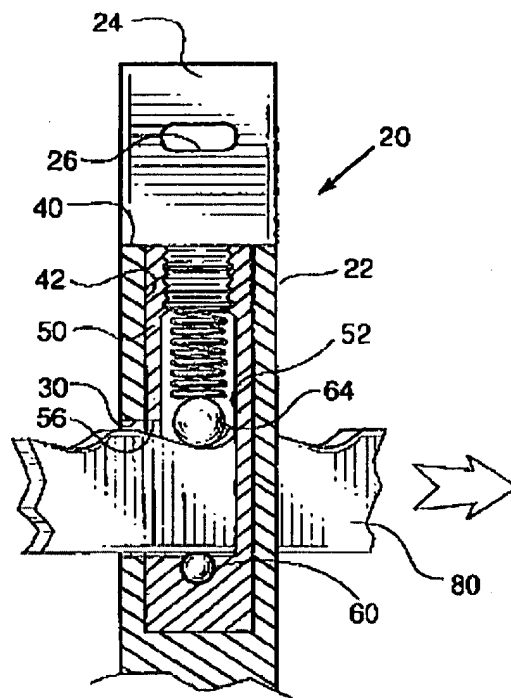
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 13 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,220,747 to Cherry. Cherry '747 discloses every element except for

Art Unit: 3637

the grooves formed on a separate member coupled to a longitudinal side surface of the moveably body. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the grooves on a separate member, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

15. Claims 8-11, 15-17, 36-39, and 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,220,747 to Cherry in view of U.S. Patent 6,711,778 to Sparkman. Cherry '747 discloses every element as described above. Cherry '747 does not disclose expressly the details of the locking unit, and the control unit in a control chamber and the location of the chamber. Sparkman '778 discloses a locking unit (64) selectively engaging with the plurality of grooves (88,90,92) provided to the moveable body (80). An elastic member (66) elastically supports the locking unit (64). The locking unit (64) comprises a retractable roller (64) selectively seated in the grooves (88,90,92) of the movable body (80) during a movement of the movable body (80). The roller (64) is perpendicular placed relative to the movably body (80), and wherein the roller (64) is elastically retractable. The control unit (64,66) is disposed in a control chamber (50), which is defined in a separate member (22) at a predetermined position on the sidewall (2) and is integrally fastened to the sidewall (2) with screw (28). At the time of the invention it would have been obvious for a person of ordinary skill in the art to take the device of Cherry and add the locking unit and control chamber of Sparkman to provide a plurality of stop positions.



Sparkman '778 Figure 2

16. Regarding claims 10 and 38, it would have been obvious matter of design choice to modify Sparkman's locking unit by having a roller bracket between the elastic member and the roller, since the applicant has not disclosed that having a roller bracket solves any stated problem or is for any particular purpose and it appears that the locking unit would perform equally well without a roller bracket.

17. Regarding claims 15 and 42, It is obvious that the control chamber is perpendicularly defined at a sidewall of the leg casing since the roller is perpendicular to the movable bar in Cherry, the control chamber is perpendicular to the roller in Sparkman, and the casing is perpendicular to the movable bar in Cherry then therefore

Art Unit: 3637

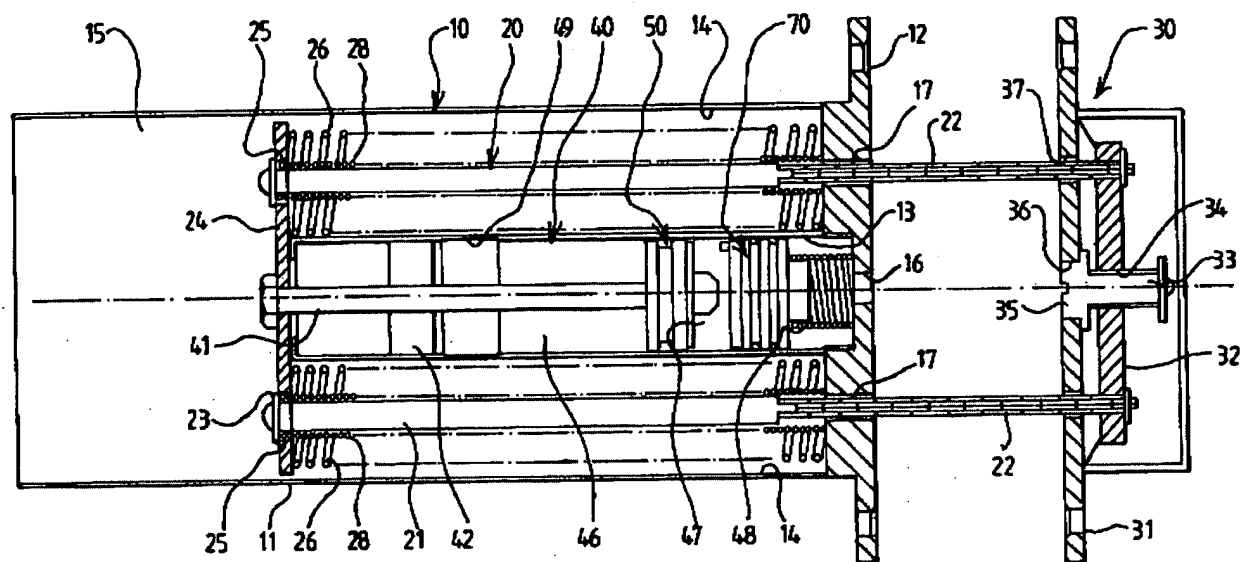
the control chamber will be perpendicular to the leg casing when the Cherry is modified by Sparkman.

18. Claims 3-5 and 30- 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,220,747 to Cherry in view of U.S. Patent 5,896,619 to Koopman. Cherry '747 discloses every element as described above and also discloses a hinge bracket (28) mounted to the door. Cherry '747 does not disclose expressly a link bar. Koopman '619 discloses a link bar (50) hinged at a first end (84) thereof to an end of the movable body (76), and connected at a second end (80) thereof to the refrigerator door (30). The link bar (50) is hinged at the refrigerator door (30). The link bar (50) is further hinged to the refrigerator door (30) in a position spaced apart from the rotating axis (52) of the refrigerator door (30) by a predetermined distance in a radial direction from the rotating axis (52). At the time of the invention it would have been obvious for a person of ordinary skill in the art to take the device of Cherry and add the link bar of Koopman so that the door can achieve a greater range of motion.

19. Claims 18-27 and 45-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,220,747 to Cherry in view of U.S. Patent 5,706,551 to Jeynes. Cherry '747 discloses every element as described above and tension spring (56) attached to the rear of the moveable body (38). Cherry '747 does not disclose expressly a dampening unit. Jeynes '551 discloses a dampening unit (10) to close a door. The dampening unit (10) uses an elastic support unit in the means of two parallel compression springs (26) to drive the shafts (22) into the body. The compression springs are connected to a support member (30) by shafts (22). The dampening unit (10) uses a hydraulic damper (40) to dampen the rate of rearward movement during closing action, thus retarding energy generated from the door. At the time of the invention it would have been obvious for a person of ordinary skill to take the device of

Art Unit: 3637

Cherry and replace the tension spring with the dampening unit of Jeynes by attaching the support member to the moveable body so that the closure rate of the door is controlled.



Jeynes '551 Figure 1

20. Regarding claims 25-27, 52, and 53, it would have been obvious matter of design choice to modify the location of Cherry's tension spring or the dampening unit when modified by Jeynes, by having it on the inner surface of the rear wall of the leg casing, since the applicant has not disclosed that having the dampening unit inside the leg casing solves any stated problem or is for any particular purpose and it appears that the dampening unit once modified by Jeynes would perform equally well with the unit outside of the casing.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,370,732 to Yezerky discloses an infinite positioned door check using a roller and spring. U.S. Patent 3,980,331 to Kennedy discloses a door check for a refrigerator. U.S. Patent 4,833,755 to Bonin discloses a lever with a wave configuration that uses guide rollers. U.S. Patent 2,074,008 to Wolf discloses a dampening unit for a door that uses a compression spring. U.S. Patent 6,640,387 to Alonso discloses a dampening unit that uses a compression spring. U.S. Patent 2,268,977 to Westrope discloses a door check device that uses a lever and spring. U.S. Patent 5,931,554 to Koopman discloses a refrigerator hinge with a link and a spring. European Patent 0,807,737 to Taylor discloses a door check device that have a wave configuration with a spring and roller member.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy M. Ayres whose telephone number is (571) 272-8299. The examiner can normally be reached on MON-FRI 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3637

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TMA
8/12/05



LANNA MAI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

